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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/429,920	10/29/1999	ATSUSHI WATANABE	392.1666/JDH	6526

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EXAMINER

LU, TOM Y

ART UNIT PAPER NUMBER

2621

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/429,920

Applicant(s)

WATANABE ET AL.

Examiner

Tom Y. Lu

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4,5,7,8,13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4,5,7,8,13 and 14 is/are rejected.
- 7) ☒ Claim(s) 4 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Request for Continued Examination filed on 7/25/2005 has been entered.
2. Upon entry of Request for Continued Examination, the amendment and written response filed on 6/22/2005 is now entered and considered.
3. Claims 1-3, 6, 9-12 and 15 have been cancelled.
4. Claims 4, 8 and 14 have been amended.
5. Claims 4-5, 7-8 and 13-14 are pending.

Response to Arguments

6. Applicant's arguments, see Remarks, page 6, filed on 7/25/2005, with respect to the rejection(s) of claim(s) 4 under 35 U.S.C. 102 (e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Jyumonji et al (U.S. Patent No. 5,987,591).
7. Applicant's arguments filed on 7/25/2005 with regard to Claim 8 have been fully considered but they are not persuasive. Applicant argues the Jyumonji reference does not teach displaying the converted image data on a teaching pendant used for generating or editing a robot program or used for operating said robot, wherein said displaying displays the image data and indication for manipulation for image processing simultaneously, or allows a user to enter a switching mode or superposition mode. The examiner notes the image data captured by the camera 30 as shown in figure 11 is displayed on a teaching control panel, and the image data is converted using camera interface 203, column 6, line 34, and the converted image data is displayed on the teaching control panel so that the operator can see the image on the panel in

order to operate the robot. Therefore, one of the alternatives of “used for operating said robot” is clearly satisfied. Additionally, the examiner notes the Jyumonji reference does teach the indication for manipulation for image processing, and an indication for manipulation for image processing is the cursor shown in figure 11, which indicates the robot needs to move in the cursor direction, and in doing so, the scenery of the picture changes, which means there is image manipulation taken place. And the cursor is seen with image data together in figure 11, therefore, the limitation of “simultaneously” is satisfied.

8. With regard to Claim 14, the examiner notes although applicant amended claim 14, no argument was presented.

Claim Objections

9. Claims 4 and 14 are objected to because of the following informalities: the preamble of each claim is deemed to be inappropriate. The examiner notes the body of each claim seems to direct to a system rather than simply an image apparatus. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claim 8 is rejected under 35 U.S.C. 102(e) as being anticipated by Jyumonji et al (U.S. Patent No. 5,987,591).

Referring to Claim 8, Jyumonji teaches a method (Jyumonji's system is implemented based on a method) comprising: fetching from a camera image data of an image of a workpiece to be worked on by a robot (column 7, lines 52-55); storing image data from the camera or intermediate image data obtained in a stage of image processing (column 7, line 56); and converting image data from the camera, the image data from the camera stored in the memory, or the intermediate image data into a gray scale or a color scale (column 6, line 34); and displaying the converted image on a teach pendant used for generating or editing a robot program or used for operating said robot, wherein said displaying displays the image data and indication for manipulation for image processing simultaneously, or allows a user to enter a switching mode or a superposition mode (The examiner notes the image data captured by the camera 30 as shown in figure 11 is displayed on a teaching control panel, and the image data is converted using camera interface 203, column 6, line 34, and the converted image data is displayed on the teaching control panel so that the operator can see the image on the panel in order to operate the robot. Therefore, one of the alternatives of "used for operating said robot" is clearly satisfied. Additionally, the examiner notes the Jyumonji reference does teach the indication for manipulation for image processing, and an indication for manipulation for image processing is the cursor shown in figure 11, which indicates the robot needs to move in the cursor direction, and in doing so, the scenery of the picture changes, which means there is image manipulation taken place. And the cursor is seen with image data together in figure 11, therefore, the limitation of "simultaneously" is satisfied).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 4-5, 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jyumonji et al (U.S. Patent No. 5,987,591).

Referring to Claim 4, Jyumonji discloses an image processing apparatus for a robot, which is built in a robot controller (column 12, lines 43-44) comprising: a unit for fetching from a camera image data of an image of a workpiece to be worked on by the robot (column 7, lines 52-55); a memory unit that stores image data from the camera or intermediate image data obtained in a stage of image processing (column 7, line 56); and a unit for converting image data from the camera, the image data from the camera stored in the memory unit, or intermediate image data to a gray scale or a color scale (camera interface 203, column 6, line 34 is the claimed "a unit for converting image data from the camera", column 6, line 38, the image is converted into a gray scale), wherein: a portable teaching pendant is connected to said robot controller through a cable (column 12, line 25); and said teaching pendant (teaching control panel TP, column 12, line 28) comprises a unit for generating or editing a robot program (the keys of K1, K2 and K3 are used to input the directional parameter to a robot program, in doing so, the robot program is edited), a unit for operating the robot (Keys K1, K2 and K3 are used to operate the robot), and a display unit (a display DP), and can display on the display unit the converted image; and said display unit displays, indication for generating or editing of the robot a program

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and indication for manipulation of image processing, together with an image simultaneously (the display unit displays a cursor, an arrow and a position indicator as indications for editing of the robot program and manipulation of image processing), or allows a user to select either a switching mode or a superposition mode. Jyumonji does not teach the teaching control panel comprises a unit used for manipulation for image processing. However, Jyumonji does disclose the teaching control panel is connected to the robot controller, which comprises an image processor 2 as shown in figure 4. The image processor is presumed to perform the claimed "image manipulation" for the teaching control panel as the teaching control panel operates the robot because the scenery of the picture on the display changes, the picture change means image manipulation processing. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to recognize it is functional equivalent to have image processor incorporated in the teaching control panel or incorporated in robot controller, which the teaching control panel is connected to through an interface. And a person of ordinary skill in the art would have been motivated to modify Jyumonji's system to have the image processor incorporated in the teaching control panel because it increases system image processing speed by eliminating the transmission delay between the teaching control panel and the image processor.

Referring to Claim 5, Jyumonji discloses a unit for displaying and superposing geometric graphics on the image displayed on the display unit in accordance with the operation procedure of the image processing and specifying an image processing with respect to the image (the arrow and position indicator shown in figure 11 are the claimed geometric graphics, which is superposed on the displayed image during operation procedure of the image processing/scenery change, which specifies the moving direction of the robot).

Referring to Claim 7, Jyumonji discloses a unit for incorporating an instruction to process an image into a program of a robot (Keys, K1, K2 and K3 instructs the arrow direction, and the arrow shown in figure 11 is the claimed “an image”, which inputs the directional parameters into the robot program).

Referring to Claim 13, the arguments in paragraph 10 above as to the applicability of Jyumonji are incorporated herein. Jyumonji does not teach the teaching control panel is a touch panel. The examiner takes official notice that teaching control panel can be modified to operate through a touch panel because the teaching control panel in Jyumonji is operated through key buttons on the right side, and a touch panel merely replaces the key buttons with virtual software buttons displayed on the display screen, functionality of the keys K1, K2 and K3 does not change.

12. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jyumonji in view of Wörn et al (U.S. Patent No. 6,362,813 B1). The arguments in paragraph 11 above as to the applicability of Jyumonji are incorporated herein.

With regard to Claim 14, the only unaddressed limitation is “a display unit can display an image processing manipulation menu”. Jyumonji does not explicitly teach the display DP on the teaching control panel TP can display an image processing manipulation menu. Wörn teaches a programming device as shown in figure 3, which contains a VGA display screen and is capable of displaying the display screen of a computer, which controls a manipulator robot 2 as shown in figure 1. At the time the invention was made, it would be reasonable for a person of ordinary skilled in the art to assume that the computer controls the robot contains an image processing manipulation menu, which in Wörn will be displayed on the programming device. And a person

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of ordinary skilled in the art would be motivated to incorporated such functionality into Jymonji's teaching control panel because Wörn teaches it is desirable to have more extensive display possibilities on a portable control panel, column 1, line 60.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom Y. Lu whose telephone number is (571) 272-7393. The examiner can normally be reached on 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mancuso can be reached on (571)-272-7695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Y. Lu

A handwritten signature in black ink, appearing to be 'Tom Y. Lu', is written over a faint, circular official stamp. The signature is fluid and stylized, with a large loop at the top and a long, sweeping stroke at the bottom. The stamp is partially obscured by the signature.